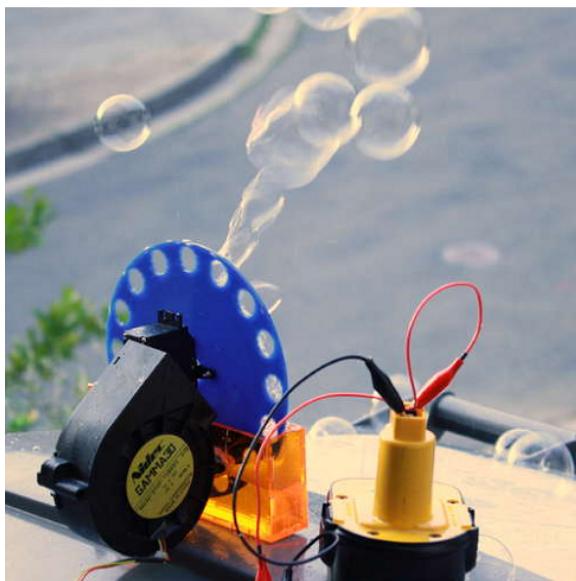


## Bubble Machine



Making your own bubble machine is a really easy and fun project. It can be made from almost anything, glued and screwed together with an end result which will keep kids (and adults!) amused for hours. With basic electronics of just a fan and a motor, a bubble machine is also a really easy first electronics project.

## Materials Required—

These are the tools and materials that I used for my bubble machine. Yours will differ greatly depending on what you have available. This is a great project to do with scraps, and odds and ends all hacked together. It doesn't have to look amazing to be a lot of fun, it just has to work.

To make it easier for others to reproduce this, I've done away with my normal format of exactly what to use and instead broken it down into the five main components the machine's made from. The 5 steps after this talk about what alternatives

# MY APPLIED JUGAAD

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you could use and what each has to do to make a great bubble machine. I then give details on how to assemble it if you did it exactly like mine.

**Trough:** To hold the bubble solution. It needs to be waterproof and not too shallow, that's it.

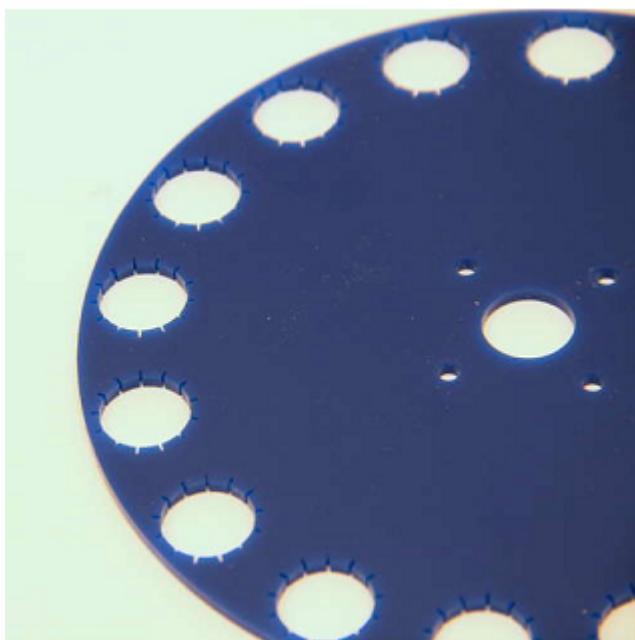
**Bubble Ring:** A ring of holes that will spin slowly through the trough picking up the bubble solution. As it lifts out of the trough the holes pass before a blower to form the bubbles

**Motor:** A slowly moving motor to spin the bubble ring. A continuous servo is perfect for this.

**Blower:** Something with a bit of puff. Will force the bubble liquid out of the holes in the ring, forming BUBBLES!

**Power:** A power source for the blower and motor.

**Tools:** Some tools like screws, glue, etc. these will be supportive for holding everything together.

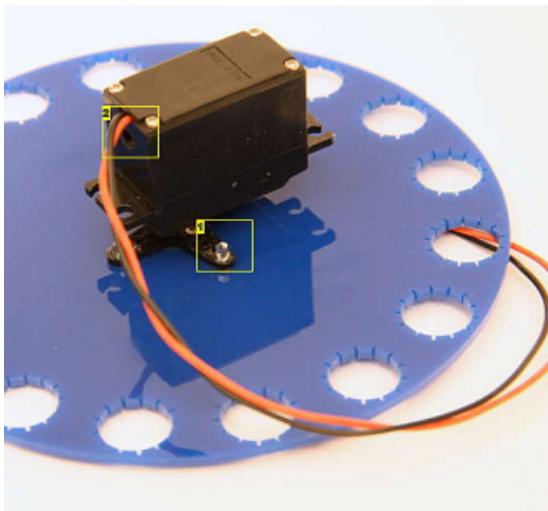


>The Bubble ring



>The trough should be like an open lid be

## Spinning:

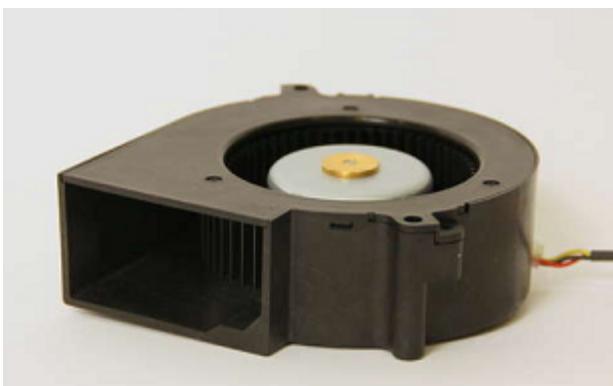


Fix your motor with the bubble ring .

## Blower:

I chose to use a \$5 centrifugal fan from Amazon. It runs on 12V and has an air flow similar to a standard PC fan but over a much smaller area. Running at 9V it wasn't durable enough, but on 12V it was flawless.

You could also use a hair dryer, heat gun on its cold setting, a small desk fan with a cone on it. I don't recommend reversing a vacuum cleaner.





## Power:

The power you'll need for your bubble engine will depend on the motor and blower you choose. I used 2 AA batteries for the servo motor and a 12V drill battery for the blower.

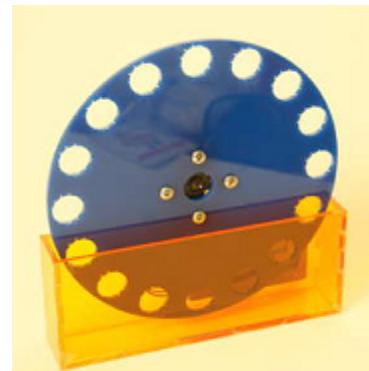
## Get-together:

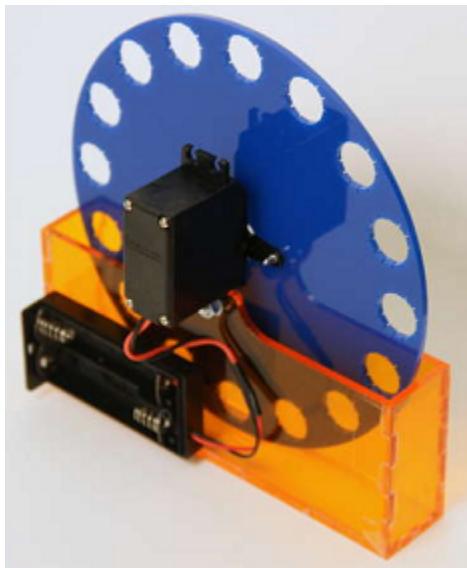
Photo 1: The servo is bolted to the trough with two M4 machine screws and nuts. The AA battery holder is hot glued to the trough and wires to the servo are soldered and insulated.

Photo 2: The bubble ring is screwed on to the servo with 4 self tapping screws. Note how close to the bottom of the trough the ring must go so that it picks up every last bit of bubble liquid.

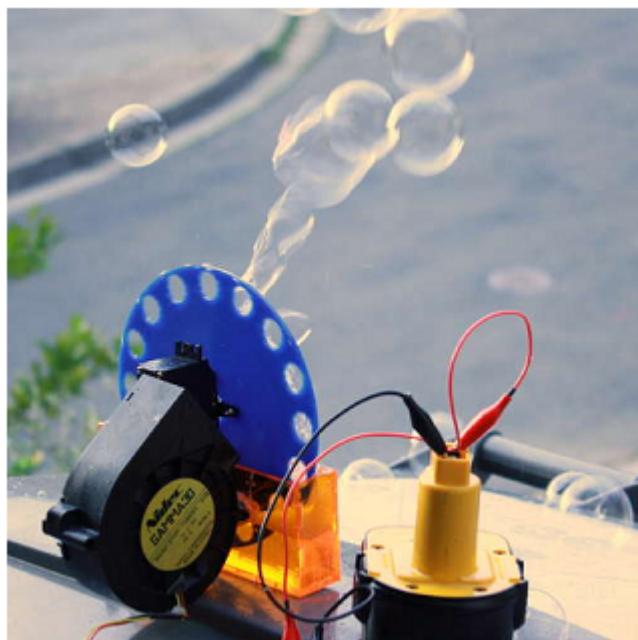
Photo 3: A rear view of the ring on the servo.

Photo 4: A centrifugal fan is glued onto the back, pointing at the holes in the ring. Test where it has to point before gluing it, see where you get the best bubbles. I found that with it pointing there the bubbles shot up as well as out. For testing I used a bench top power supply, outside I switched to a 12V cordless drill battery.





Just turn it on:





THANKS  
FOR  
WATCHING